Status of the High Current Proton Accelerator for the TRASCO Program

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TRASCO (acronym for TRAsmutazione di SCOrie) is a joint INFN/ENEA program, started in 1998, aiming at the design and the technological investigation of the main components of an accelerator driven system (ADS) for nuclear waste transmutation. The proposed 30 mA proton linac (TRASCO-AC) consists of: an 80 kV ECR source; an RFQ up to 5 MeV; a superconducting linac with independently-phased cavities (either of reentrant type, quarter-wave or half-wave resonators) up to 80-100 MeV; and finally a 3 section superconducting linac with elliptical multi-cell cavities up to 1 GeV. Several key components of the proposed linac have been built and tested. The main achievements and the activities planned for TRASCO_AC are briefly outlined.